

HOT SWITCHABLE VOLTAGE BUS FOR IDDQ CURRENT MEASUREMENTS

ABSTRACT OF THE DISCLOSURE

[00040] A voltage island system including a hot-switchable voltage bus for IDDQ current measurements. The voltage island system includes a plurality of voltage islands (V1, V2, ..., Vn), a global power system, and a quiescent power system. The global power system includes a plurality of on-chip global header devices (H1, H2, ..., Hn) for selectively providing a voltage VDDg to the plurality of voltage islands in response to global header control signals (x1, x2, ..., xn), respectively. A global VDDg power supply provides power to the global header devices (H1, H2, ..., Hn) via a VDDg power distribution grid/bus. The quiescent power system includes a plurality of on-chip quiescent header devices (H1q, H2q, ..., Hnq) for selectively providing a quiescent voltage VDDq to the plurality of voltage islands in response to quiescent header control signals x1q, x2q, ..., xnq, respectively. A quiescent VDDq power supply provides power to the quiescent header devices via a VDDq power distribution grid/bus.